



CALFED
BAY-DELTA
PROGRAM

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Agenda Item: 9
Meeting Date: May 25, 2006

BAY-DELTA PUBLIC ADVISORY COMMITTEE

END OF STAGE 1 PLANNING

Description: An oral report will presented at the meeting.

List of Attachments

Attachment 1 – Delta Vision Process Proposal

Attachment 2 – California Urban Water Agencies letter to Director Joe Grindstaff
with comments about proposed Delta Vision process

Contact

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California Bay-Delta Authority

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For Discussion Purposes Only

Has Not been Approved by Resources or Business, Transportation and Housing Agencies

Delta Vision Process Proposal

Purpose & Outcomes

- **Meet the requirements of Assembly Bill 1200** (Water Code Sections 139.2 and 139.4).
- **Encompass & integrate many ongoing and currently disjointed Delta planning efforts.**
- **Describe a “Current Trends 2100 Delta” Scenario to identify risks and consequences** of continuing the current uses and resource management practices in the Delta on its ecosystem, infrastructure, water conveyance and quality, and local and state economies, in light of changing climatic, hydrologic, environmental, seismic, and land use conditions.
- **Develop a long-term Delta vision and strategic plan for sustainable management of the Delta** covering its multiple uses, resources and ecosystem in cooperation with elected officials, government agencies, stakeholders, academia, and affected California communities.
- **Develop recommendations for public policy and resource management options** to realize the Delta vision and strategic plan.
- **Prepare a contingency and emergency response plan** for near-term catastrophic events.
- **Inform future Delta planning decisions** such as those pertaining to the CALFED Bay-Delta Program, Delta Habitat Conservation Plan and Natural Communities Conservation Plan, updates of related General Plans, transportation and utilities infrastructure plans, integrated regional water management plans, and other resource plans.

Deliverables & Due Dates

DVP Deliverable	Due Date
Executive Approval to initiate the DVP.	May 2006
Stakeholder Assessment Report -- includes inventory of Delta planning efforts; areas of substantial agreement, significant disagreements, and perceived information/data gaps.	May - August 2006
Technical Assessment Report -- includes inventory of current Delta resources, assets, and their future trends; and documents existing data, studies, and identified information/data gaps.	May - October 2006
Delta Vision Framework Report -- includes Current Trend Delta 2100 Scenario; Delta risks and consequences; framework for Delta contingency and emergency response plan; and 2 nd year process design and deliverables.	January 2007
Draft Delta Vision Report w/ Initial Blue Ribbon Commission Recommendations – includes public policy and resource management/maintenance options; Delta contingency and emergency response plan; and how to track and update Delta strategic plan.	October 2007
Final Delta Vision Report with Final Commission Recommendations	January 2008

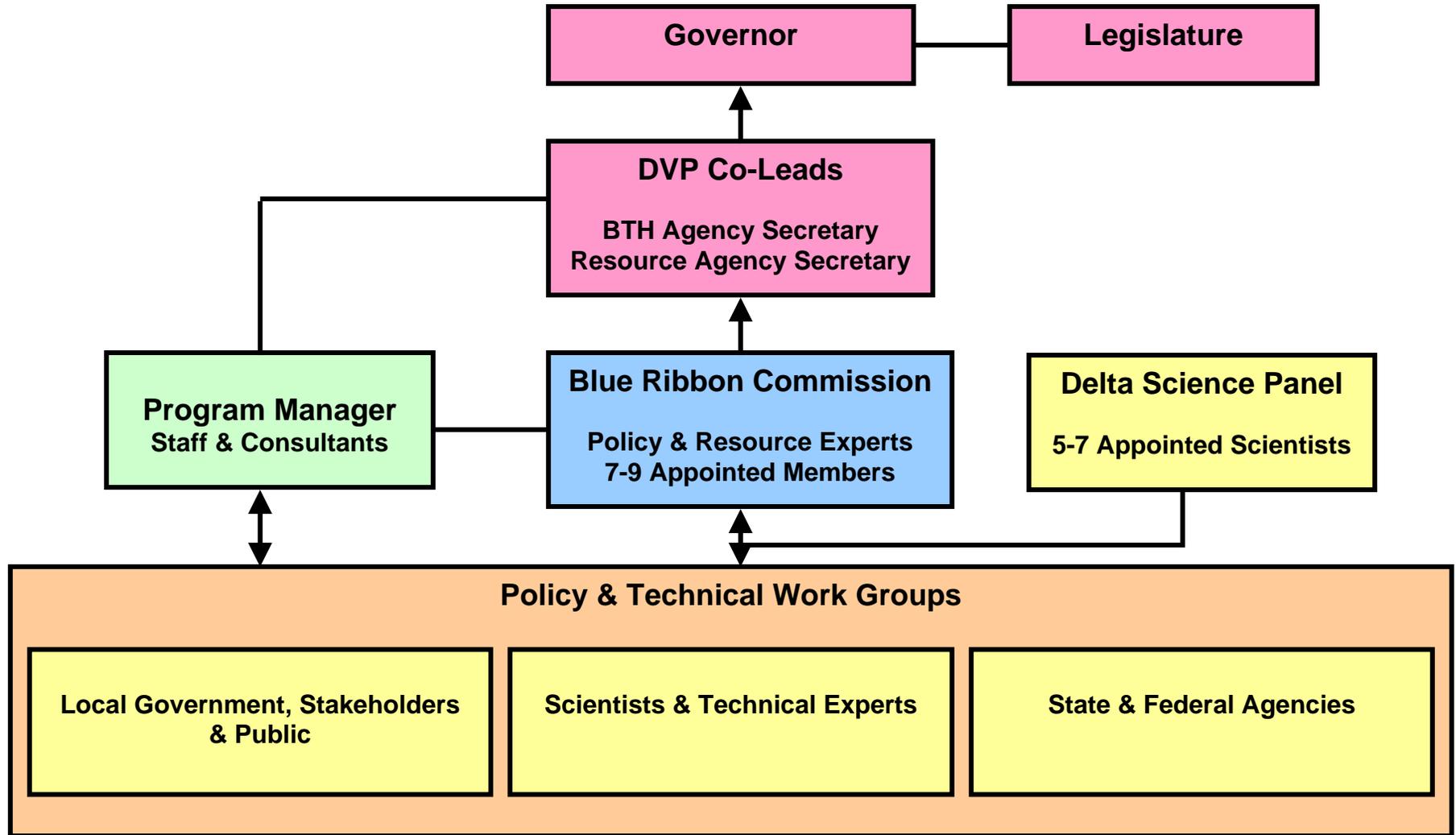
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Delta Resources & Uses Covered by Delta Planning Efforts

Resources & Uses >>													
Planning Efforts	Land Use Planning	Agriculture	Transportation	Utilities	Urban Development	Bay-Delta Ecosystem	Flood Protection	Water Conveyance & Quality	Air Quality	Navigation	Recreation	Energy	Local & State Economy
Delta Vision Process	●	●	●	●	●	●	●	●	●	●	●	●	●
AB 1200	●	●	●	●		●	●	●		●	●		
Delta Risk Management Study	●	●	●	●	●	●	●	●		●	●		
Delta Regional Ecosystem Restoration Implementation Plan	●	●		●		●	●	●	●	●	●		
Delta Protection Commission	●	●	●	●	●	●	●	●	●	●	●		●
SF Bay Conservation & Development Commission	●	●	●	●	●	●	●	●	●	●	●	●	●
SF Bay Comprehensive Conservation Mgmt Plan						●		●	●		●		
Sacramento Area Council of Governments	●	●	●	●	●	●	●		●	●	●		●
San Joaquin Council of Governments	●	●	●	●	●	●		●	●		●		●
Association of Bay Area Governments	●	●	●	●		●	●	●	●		●		●
California Partnership for San Joaquin Valley	●	●	●	●	●	●	●	●	●		●	●	●
State Parks Central Valley Vision	●	●		●		●					●		●
CALFED Program		●		●		●	●	●		●	●	●	
Suisun Marsh Preservation Agreement & Protection Plan				●		●	●	●		●	●		
California Water Plan	●	●		●		●	●	●		●	●	●	
Bay-Delta Water Quality Control & Basin Planning	●	●			●	●	●	●		●	●		●
CPUC & Energy Commission Energy Action Plan	●	●			●	●	●	●		●	●		●
Yolo Basin/Bypass Plan		●				●	●	●			●		
Cal-EPA Climate Change Assessment and Report	●	●	●	●	●	●	●	●	●	●	●	●	●
UC Berkeley & UC Davis Delta Visioning Efforts	●	●	●	●	●	●	●	●	●	●	●	●	●

Delta Vision Process Organization Chart



Act on Recommendations

Recommend

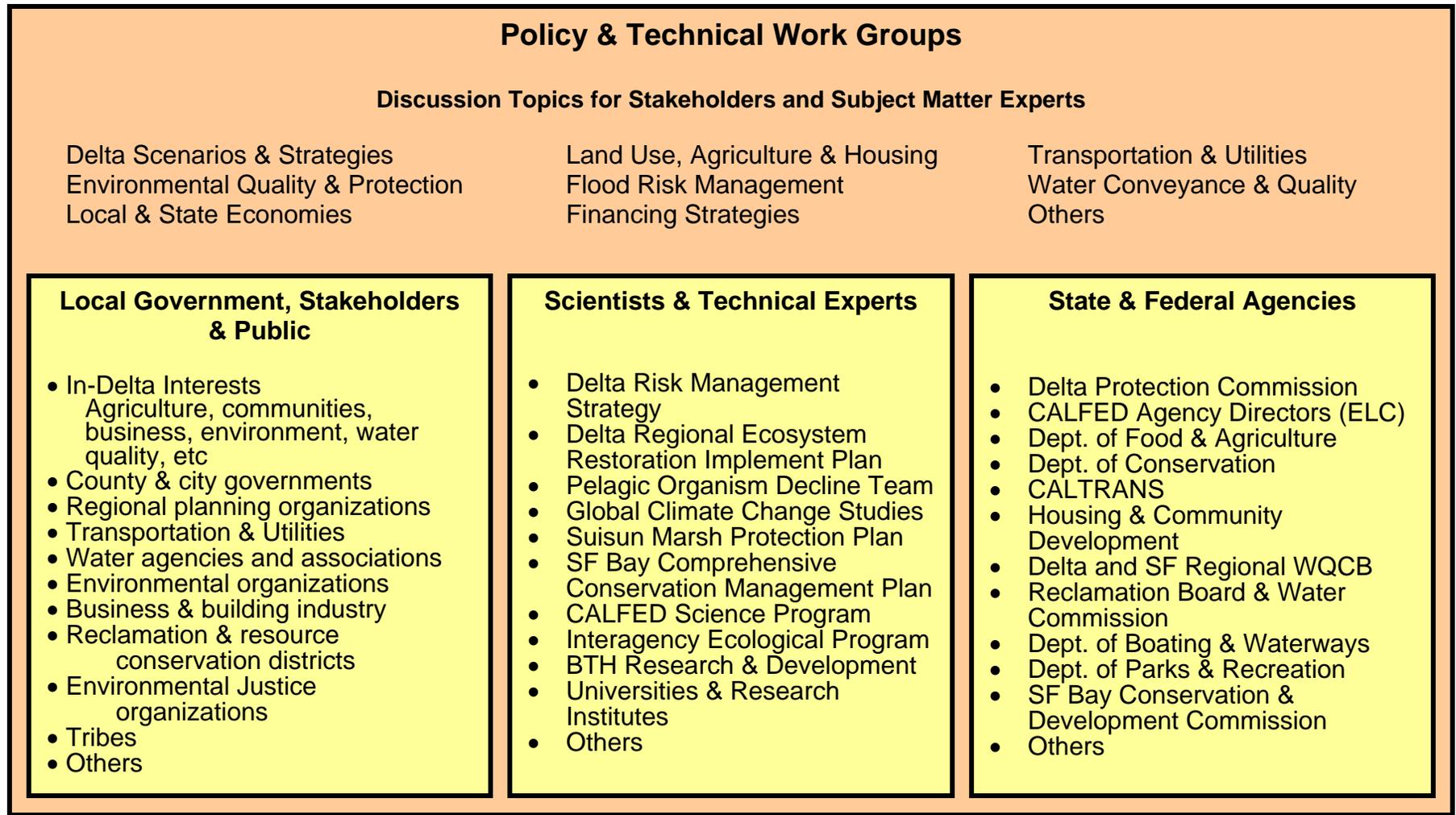
Manage & Facilitate

Policy & Tech Work

Advise & Review

Delta Vision Process Work Group Topics & Participants

Draft 5-08-06



Act on Recommendations

Recommend

Manage & Facilitate

Policy & Tech Work

Advise & Review

Delta Vision Process Work Group Detail

May 8, 2006

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CALIFORNIA URBAN WATER AGENCIES

2006 MAR 30 PM 1:00

March 27, 2006

Mr. Joe Grindstaff
Executive Director
California Bay-Delta Authority
650 Capitol Mall, Fifth Floor
Sacramento, CA 95814

Subject: Comments on proposed Delta Vision process

Dear Mr. Grindstaff:

The Board of California Urban Water Agencies (CUWA) supports efforts at looking at the future of the Delta in the long term, and appreciates the work done to date to help frame the upcoming Delta Vision Process. An outcome from that process should be a roadmap for public investments in Delta levees, as well as allocation of costs to the various beneficiaries.

We have prepared the attached "white paper" as early input to the Delta Vision Process. This paper outlines the basic issues associated with allocation of costs, and summarizes the types of infrastructure that rely on the current configuration of Delta islands. We offer some basic ideas for allocating costs.

CUWA expects to participate actively in the Delta Vision Process. We plan to provide further input in the near future on the process itself.

Sincerely,

Steve Macaulay
Executive Director

Attachment



White Paper
Cost Allocation Issues for Long-term Delta Investments
March 27, 2006

Introduction

This “white paper” outlines the issues to allocating costs for long-term investments in the Sacramento-San Joaquin Delta. Events over the past few years, coupled with recent studies, confirm that the Delta is a fragile structural environment. Many islands are below sea level – essentially “holes” protected by fragile levees that hold water back 24 hours a day, 365 days a year. Local, State and Federal levees that were originally built to provide flood control and protect agriculture (and in some cases, provide water supply) are now relied upon to do much more. The Delta road systems (including three State highways), major energy and water infrastructure and, increasingly urban areas are now protected by the levees. More and more new housing is being constructed in areas protected by levees. The Delta is the major hub for extraction and movement of resources such as natural gas. It also serves as a transportation corridor for railroads and cargo ships, including access for movement of goods from the Pacific Ocean to major inland commercial ports at Stockton and Sacramento. The Delta is also an important highly-used regional recreational resource for fishing and boating.

While many millions of dollars every year are spent in and around the Delta, the issues outlined in this paper relate to the configuration of Delta islands, how they may look in the long-term, who may benefit from current and possible future configurations, and how costs to invest in preserving or modifying that configuration might be allocated. The current configuration cannot be sustained without major investment – “major” being in the billions of dollars. Even so, the continued rise of sea level, subsidence of the Delta islands, and the enormous technical challenges of converting peat-based levees into reliable structures have caused many to conclude that the current configuration of the Delta cannot be sustained. Time is not standing still – the levees continue to deteriorate, farming continues to cause many islands to subside, and encroaching urbanization increases the potential economic losses of levee failures.

Purpose

This paper explores three broad issues, all in the context of potential future investments in the geographic configuration of the Delta:

1. Threats to the Delta
2. Current beneficial uses
3. Future needs, conceptual allocation of costs

The focus of this paper is on human uses, but a critical factor will continue to be the health of fish and wildlife species that have used the Delta in both its past and current configurations. The Delta is an essential place for resident and migratory fishes, and some fish populations are perilously low. This paper does not address benefits that may be allocated to such purposes, which could be substantial. Allocation of such costs is assumed to be handled separately, perhaps through a combination of public funds and the soon-to-commence Delta HCP/NCCP process.

Threats to the Delta

UC Davis professor Jeffrey Mount has made a number of public presentations on the probabilities of major seismic events causing catastrophic flooding of Delta islands, disrupting much of the State's water supplies and having serious economic and other impacts to the full range of Delta uses and its beneficiaries. Threats to the Delta levee system have been known for many years. DWR's Delta Atlas (last published in 1995) includes a thorough discussion of the long history of levee failures and subsequent efforts to reclaim and restore flooded islands. In some cases, islands were simply abandoned. According to the Delta Atlas, "Levee failures are not rare occurrences in the Delta. Since original reclamation, each of the 70 islands has flooded at least once.... In some cases, the cost of repairs exceeded the appraised value of the land" (Delta Atlas, page 47). The Delta Atlas can be found on line at:
<http://baydeltaoffice.water.ca.gov/DeltaAtlas/index.cfm>.

Farming in the Delta began in 1849, and substantial levee construction using dredges began in 1880. Delta levees have been failing for many decades. Figure 1 is a map showing islands (shaded) that flooded from 1930 through 1966. Figure 2 shows islands that flooded from 1967 through 1992, the last time these maps were updated by DWR. In 2004 the flooding of Upper Jones Tract received major attention, particularly since the levee failures came at a time of calm weather and normal water levels. Both maps depict multiple failures of a number of islands over the years. DWR's March 2006 video on levee failures indicates that there have been more than 140 levee failures in the Central Valley over the past century, with many or most in the Delta.

Evidence of rising sea levels, combined with continued subsidence of peat soils on many islands and the potential for more intense flood flows as a result of global climate change, provide a combined threat that cannot be ignored.



Figure 1. Historical Delta Flooding, 1930-1966

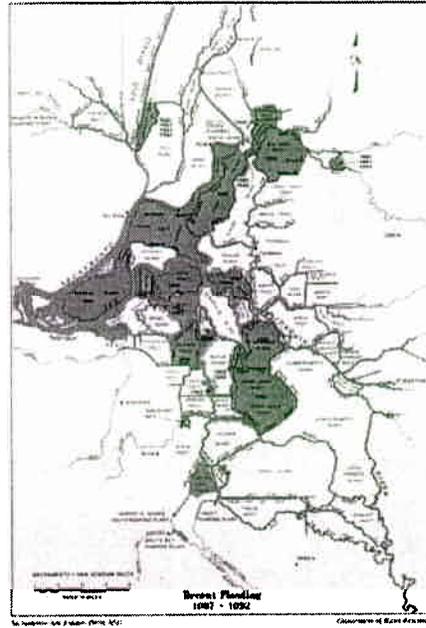


Figure 2. Recent Flooding, 1967-1992

Figure 3 is a graphic from DWR's 1995 Delta Atlas (page 29) showing conceptually how the Delta has changed from a shallow tidal estuary prior to development, to what it looks like today after 150 years of farming and other activities.

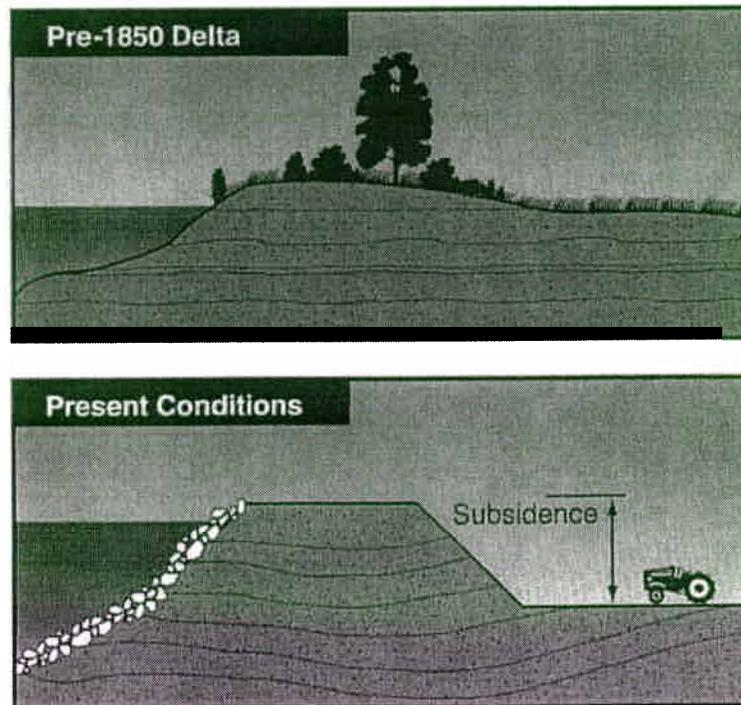


Figure 3: Pre-1850 Delta, Present Conditions

Current Delta Beneficial Uses Tied to Existing Configuration

The Delta as defined in the California Water Code consists of about 700,000 acres of land and water. It is a region of many uses:

- Agriculture: 70 islands, more than 500,000 acres of irrigated agriculture. Most of this land is tilled and exposed to oxidation every year, resulting in some locations of subsidence of more than 20 feet below current channel water levels. There are no plans to modify this practice, which continues to worsen the problem year after year. At the same time Delta farmers are not financially capable of maintaining existing inadequate levees. Agriculture is important to the regional, state and national economy.
- Surface land transportation: Three State highways (4, 12 and 160) transect the Delta, providing essential linkages between the region and the Bay Area / Sacramento / Central Valley. These highways are built on the tops of levees, across islands and over bridges crossing Delta channels and rivers. All three State highways have been affected by past flooding of Delta islands. There are also many miles of county roads in the Delta's transportation network, in addition to rail lines. At the edge of the Delta are Interstates 5, 80 and 205.
- Shipping transportation: The Stockton and Sacramento deep water ship channels serve many ocean-going freighters that provide a lifeline transporting agricultural and other commodities to ports on the West Coast and the Pacific Rim. The ship channels are an important component of the regional economy.
- Natural gas storage and transport: The Pacific Gas and Electric Company has developed extensive subsurface natural gas storage facilities, which have become an essential part of PG&E's capabilities in meeting winter peak natural gas demands.
- Urban development: A drive around the edge of the Delta on Interstate 5 reveals extensive urban development over the past decade in Lodi, Stockton, Manteca and Tracy – all major communities that border directly on the Delta.
- Recreation (water-based and land-based, including State and local parks): the Delta is a recreational showpiece, and has long been a magnet for fishing, house boating, water skiing, sailing and other activities. DWR's 1995 Water Atlas reports 12 million user-days per year of recreational use.
- Television transmission towers: The community of Walnut Grove is home of several major regional television transmission towers, with the initial towers built 40 years ago.
- Water and Wastewater: The Central Valley Project, State Water Project and Contra Costa Water District have water supply intakes in the Delta. Since the

Delta is at sea level, it will always have water. The key is the quality of water, which is a function of fresh water inflows/outflows and the physical configuration of the Delta. In addition, the City of Stockton is proceeding with plans for a water supply intake as it shifts from local ground water. A number of public agencies discharge treated wastewater within the boundaries of the Delta: Sacramento Regional County Sanitation District, City of Stockton, City of Lodi (land disposal), City of Manteca, and the City of Tracy. The new town of Mountain House is projected to discharge tertiary-treated wastewater to Old River in the near future near the CVP and SWP export locations. East Bay Municipal Utility District's Mokelumne River Aqueduct (pipeline) crosses several islands in the Delta, including the recently-flooded Jones Tract.

The core of the Delta is below sea level. It is referred to by the Delta Protection Commission as the Primary Zone. This area comprises 300,000 acres of land, with roughly 650 miles of levees. Of this total, only 144 miles of levees are classified as Project Levees, and the remaining levees are private and maintained by landowners through their reclamation districts or other institutions. There is a great deal of infrastructure within the Primary Zone.

Table 1 includes data on various infrastructure categories that are located in the Primary Zone. The source of this information is DWR's 1995 Delta Atlas, updated to the present. The information in Table 1 is number of Delta islands below sea level associated with the indicated infrastructure feature. For example, state highways are located on 10 islands below sea level, and high-voltage electric transmission lines are found on 19 of the Delta islands below sea level. It is clear from the table that multiple interests, including agriculture and urban landowners, water users, transportation systems, and gas, electric, sanitation, and communication entities, benefit from protecting this resource.

**Table 1. Improvements on Delta Islands Below Sea Level
 Data is Number of Delta Islands Unless Otherwise Indicated**

FEATURE	No. of Islands
Highways	19
State	10
County	11
Railroads	8
Transmission Utilities	
Hi-Voltage Electric	19
TV / Radio Towers / Cell Towers	9
Gas Pipelines	12
Thru-Delta Aqueducts & Urban Intakes	6
Wastewater Treatment Facilities	6
Underground Gas Storage Fields	3
Land Use	
Agriculture	49
Cities, towns, urban	16
Recreation Resorts	23
Export Conveyance	
Improvements	12
Maintenance priorities	12

** Delta levee maintenance based on average 1981-1991 expenditures and escalated to 2006 dollars.*

Future Needs, Conceptual Allocation of Costs

This comes down to how to address the future of the Delta levees, and what Californians want the Delta to look like in 50, 100 and 200 years. The Governor plans to conduct a major "Delta Vision Process" to examine and recommend what the Delta could look like in a long-term framework. This will be a high priority activity between now and the end of 2007, co-chaired by Secretary of Resources Michael Chrisman and Secretary of Business, Transportation and Housing Sunne Wright McPeak. While this process has not been officially announced as of late-March, indications are that it will be a very comprehensive and public process, addressing a wide range of interests and concerns tied to the current configuration of the Delta. Discussions at the March 15 BDPAC meeting indicated that the Governor is expected to initiate the Delta Vision Process in April by executive order. It was clear at the BDPAC meeting that there are many conflicting points of view as to how broad and comprehensive this process should be. Our expectations are that results of this process will be used as a basis of a future strategic investment program for public funds. In the meantime, there are pressures to begin investments in Delta levees knowing that major investments are needed simply to preserve the major components of the existing landscape. While current legislative efforts at both the State and national levels may have been initiated by the national attention to the Hurricane Katrina disaster, it is something that has needed this level of attention for decades.

All the pieces are not yet in place for funding of long-term Delta levee investments. Here is what we know now:

- The proposed 2006 water bond (fate uncertain as of March, 2006, but will not be on the June 2006 ballot) had included \$1 billion for flood protection, of which \$210 million is for "Project Levee and Facility Repairs" and another \$210 million is for "Delta Levee Subventions and Special Projects".
- The bill language also would have linked Delta levee investments to outcomes of the Delta Risk Management Strategy being developed by DWR.
- The proposed 2006 bond also included \$1 billion for "Statewide Water Management", and funding for Delta improvements could come from some of the specific programs described under this section.
- The proposed 2010 bond had components similar to those outlined above for the 2006 bond, including: (a) \$700 million for Delta subventions and special projects, and (b) \$2.5 billion for statewide water management.
- As indicated earlier, the Administration will pursue a Delta Vision Process, which will also address the requirements of AB 1200 for DWR and DFG to make recommendations to the Legislature by January 2008.
- The proposed legislation would have created a water resources investment fund (WRIF), with half of the \$300-500 million per year deposited in a State Investment Account to be spent by DWR on programs of statewide importance. While the bill language seemed to contemplate grant funds awarded back to the regions, there did not appear to be any restriction on use of such funds for Delta levees as well. While the WRIF proposal is no longer being pursued, the concept of a broad-based water user fee is likely to resurface in the future.
- While outcome from the UOP negotiations includes development of an HCP/NCCP for the Delta, it does not address long-term Delta funding (although it could be used partially to apportion financing responsibilities for environmental resources, depending on who participates and what they want to accomplish).
- The draft CALFED 10-Year Action Plan does not address long-term Delta funding, although it recommends the first piece: the Delta Vision Process.
- The Federal Government has several interests. First, that there are broad economic benefits in sustaining the agriculture of the Delta region. Second, the Federal Government owns and is responsible for a number of the Delta levees and has an interest in investing in the upkeep or replacement of these facilities, mostly on a cost benefit basis to avoid the high liability associated with levee failure.

A solid, supportable funding plan requires the following:

1. Complete the "Delta Vision Process" and DWR's Delta Risk Management Strategy so that we have a plan for directing investments in the Delta. Significant capital expenditures in Delta levees should be examined in the broader context of sustainability and long-term Delta objectives, including water quality, water supply and habitat restoration.
2. Develop a conceptual proposal for sharing the costs equitably among all beneficiaries. This will be some form of apportionment among local interests (transportation, pipelines, gas storage, housing, farming, etc.), water users who benefit from the Delta, and the general public both at the State and national level. The apportionment should be founded on the concept that entities contribute to solutions to the extent they receive quantifiable benefits.
3. Develop a conceptual finance plan that addresses the mechanism and form of payment(s).
4. Develop appropriate changes to the institutional framework, with an existing or new operating entity having the responsibility to: (1) collect funds, (2) make timely decisions, (3) contract for services (or contract with governmental agencies that carry out construction/maintenance as part of their existing authorities), and (4) provide control and oversight to assure that funds are properly and timely spent.
5. Provide appropriate linkages to proposed bonds.
6. Do not include any linkages to the proposed WRIF. That or any successor proposal should live or die on its merits, and not tied to a Delta levees funding strategy.

While a significant amount of time and energy can be devoted to allocating the cost of improving and maintaining the levees to the various parties, it is clear that statewide (and even national) interests are served by the system. As such, general obligation bonds and federal funding for capital improvements necessary to shore up the levee system are appropriate. However, ongoing operations and maintenance cannot be neglected. Table 2 summarizes the various funding mechanisms that are potentially available to different sectors to help meet ongoing needs in the Delta.

Table 2. Potential Funding Sources for Delta Levee Improvements & Maintenance

Capital Costs (improvements & major maintenance)	Who Pays?	Operating & Maintenance Costs	Who Pays?
Federal Funds	Federal Government	State General Fund	State Taxpayers
State General Obligation Bonds	income taxes, etc.	Assessments	Local Reclamation & Levee Districts- landowners
Mello Roos or Community Facility District Bonds	Local users – ag/urban interests	Revenue Taxes/ Franchise Fees	Investor owned utilities (gas, electric, television, radio)
Development Fees	Developers/new homeowners	Water Rates and Fees	Federal/State/Local water projects – water ratepayers
Parcel Charges/Assessments	Landowners		
Water / Wastewater bonds	Water users	Water Rates and Fees	Water / Wastewater users

The burden of improving, repairing, and maintaining the levee system should not fall to any one sector of the economy. Sustainable funding will likely come from a number of different sources, with the state and federal government, along with local entities playing an important role.